APPENDIX H:

DETAILED PROFILE - OTHER MISCELLANEOUS INDUSTRIES

APPENDIX H: DETAILED PROFILE - OTHER MISCELLANEOUS INDUSTRIES

H.1 OTHER TRADITIONAL ANIMAL INDUSTRIES

This section provides an overview of other livestock operations that are regularly surveyed by the U.S. Agricultural Census, but are not covered previously in individual chapters. These industries include: horses; mules/burros/donkeys; goats (both for milk and mohair); rabbits; minks; and other miscellaneous groups. Limited data are available to provide a thorough overview of these sectors. Data are not available to provide an overview by representative farm size. Farm per-unit price data are not available and, in some cases, farm revenue data are not available. Other market data and information, including production, trade and demand are also not available.

H.1.1 Horses

Between 1982 and 1992 the number of horse farms in the United States declined from 415,565 farms to 338,346 farms, a decrease of 19 percent. During the same period, year-end inventories percent from 2.46 million in 1982 to 2.05 million in 1992. The average number of animals per farm remained constant during the 5-year period (1987-1992) at about six horses raised per farm. (See Exhibit H.1). Additional information is not available on representative farm sizes among the nations horse farms.

Farm level sales from horses sold were valued at $647.3 million in 1992 (Exhibit H.1). The number of horses sold dropped 9 percent from 338,152 horses sold in 1987 to 307,209 horses sold in 1992. Ranked by the number of animals sold in 1992, the major states that raise horses include: Texas (13 percent); California (5 percent); Oklahoma (4 percent); Kentucky (4 percent); and Missouri (4 percent). Other major producers include farms in Ohio, Iowa, Indiana, Tennessee, California, and Illinois.

In 1992, an estimated 42 million tons of manure was produced by U.S. horse operations. Because of falling horse inventories, the amount of manure generated from U.S. horse operations is decreasing, falling by about 9 percent during the 10-year period from 1982 to 1992. As a share of all manure produced from all livestock and poultry operations in the United States, horse operations accounted for approximately 4 percent of all animal waste generated by U.S. farms in 1992. This is slightly below that generated by the entire U.S. poultry sector. Potential nutrient loadings from horse manure generated on-farm were also significant in 1992, totaling 581 million pounds of nitrogen, 176 million pounds of phosphorous, and 314 million pounds of potassium during the year. (See Exhibit 4.2)

H.1.2 Mules, Burros, and Donkeys

Combined mule, burros, and donkey farm inventories increased 20 percent over the 10-year period, from a total of 56,620 animals in 1987 to 67,692 animals in 1992. The number of farms that raise these animals in the united States totaled 25,589 farms in 1992, up 10 percent from 1987 when there were 23,311 farms. The average number of animals per farm rose slightly over

the period to about three animals per farm. (See Exhibit H.1). Additional information is not available on representative farm sizes among farms that raise mules, burros and donkeys.

Sales of these animals totaled $2.6 million in 1992 (Exhibit H.1). The number of animals sold rose by more than one-fourth to 9,007 animals sold in 1992, up from 7,147 animals sold in 1992. Ranked by number of animals sold in 1992, the major states with these animals include: Texas (17 percent); Tennessee (10 percent); Missouri (6 percent); Kentucky (5 percent); and Oklahoma (3 percent). Other major producers are located in Iowa, Oregon, Idaho, Indiana, and Illinois.

Sufficient data and information are not available to estimate the potential manure and nutrient loadings from farms that raise mules, burros and donkeys.

H.1.3 Goats

The number of operations, animal inventories and sales from U.S. goat farms rose significantly during the 5-year period from 1987 to 1992. Sales rose across each end-commodity type, including goats milk, mohair, and animal sales. Despite this expansion the number of animals per farm has remained fairly constant, averaging about 50 animals per farm. The number of goat farms in the United States totaled 47,164 farms in 1992. Milk and angora goats are reviewed separately below.

The manure and nutrient loading generated from all U.S. goat operations totaled an estimated 1 million tons in 1992. As a share of all manure produced from all livestock and poultry operations in the United States, manure from goat operations accounts for less than 1 percent of all animal waste produced annually. However, increasing goat inventories have raised manure and nutrient loadings from goat farming in recent years. In 1992, estimated nutrients from goat manure generated on-farm totaled 43 million pounds of nitrogen, 13 million pounds of phosphorous, and 26 million pounds of potassium during the year. (See Exhibit 4.2)

Milk Goats. The number of milk goat farms in the United States declined from 15,433 farms in 1987 to 11,559 farms in 1992, a decrease of 25 percent. Nevertheless, sales of goat milk increased from 4.4 million to 7.2 million gallons over the 5-year period. Goat milk sales were valued at $20.6 million in 1992 (Exhibit H.1). Increase goat milk sales were driven by an increase in consumer demand over the 1987-1992 period, resulting in increased marketings of milk, expansion among farms and also production efficiency gains. Year-end animal inventories over the period rose from 2.2 million goats in 1987 to 2.5 million goats on-farm in 1992. The number of goats per farm also rose, up from an average of 8 goats to 11 goats per farm nationally. (See Exhibit H.1). Additional information is not available on representative farm sizes among milk goat farms.

Ranked by goat milk sales in 1992, California (17 percent) is the leading milk goat state, followed by Wisconsin (12 percent), Texas (8 percent), New York (8 percent) and Iowa (4 percent). Other major producers include farms in Washington, Ohio, Michigan, Missouri, and Montana.

Angora Goats. Mohair sales from angora goats also rose slightly during the 5-year period, up 4 percent from 1987 and totaling 13.7 million pounds sold in 1992. The number of farms rising angora goats increased from 5,352 farms in 1987 to 6,150 farms in 1992, an increase of 15 percent. Year-end inventories remained more or less constant at about 1.8 million angora goats. The number of goats per farm decreased, on average, to under 300 goats per farm. (See Exhibit H.1). Additional information is not available on representative farm sizes among angora goat farms.

Texas is by far the industry leader in mohair sales, accounting for over 80 percent of all mohair sold annually. In 1992, other top states included California (4 percent of sales), Oklahoma (3 percent), New Mexico (3 percent) and Missouri (1 percent). Other major producing sates include North Dakota, Kansas, Montana, Michigan, and Colorado.

H.1.4 Rabbits

Sales of rabbits In the United States dropped during the 5-year period, from 2.2 million rabbits sold in 1987 to 1.9 million rabbits sold in 1992. However, the number of operations raising rabbits rose slightly (2 percent) to 14,506 farms in 1992. Year-end animal inventories on these farms also rose from about 672,000 animals in 1987 to 789,00 animals in 1992. The average number of rabbits per farm rose slightly over the 1987-1992 period to about 50 animals per farm. Additional information is not available on representative farm sizes. Also, manure and nutrients generated by farms that raise rabbits is not estimated due to insufficient data and information.

Farm level sales of rabbits totaled $15.0 million in 1992. Major states selling rabbits raised on U.S. farms include: California (14 percent), Arkansas (10 percent), Oregon (7 percent, Missouri (7 percent), and Pennsylvania (4 percent). Other major producing states include Florida, Washington, Texas, Wisconsin, and Louisiana.

H.1.5 Mink

The number of farms, animal inventories and sales from U.S. mink farms decreased significantly from 1987 to 1992. The number of mink farms dropped over 40 percent to 798 farms in 1992. Year-end inventories of mink on these farms dropped 20 percent from 2.2 million animals in 1987 to 1.8 million animals in 1992. Sales of mink and their pelts also dropped nearly 30 percent from 4.4 million sold in 1987 to 3.2 million sold in 1992. The value of farm level sales on 1992 totaled $68.9 million, down substantially from 1987.

Over the 1987-1992 period, however, the average number of mink per farm rose substantially, up from 1,585 animals per farm to 2,215 animals per farm. Additional information is not available on representative farm sizes among U.S. mink farms. Wisconsin is the leading mink producing state, accounting for over one-fourth of the market's animal sales in 1992. Other top producing states include Utah (20 percent), Minnesota (11 percent), Oregon (7 percent), and Idaho (6 percent), as well as Indiana, Washington, Michigan, Iowa, and Pennsylvania.

Sufficient data and information is not available to estimate the potential manure and nutrient loadings from U.S. mink farms.

H.1.6 Other Miscellaneous Livestock

Exact information is not available on what is included in "Other Livestock" category reported by the U.S. Agricultural Census and may include other non-traditional animals, which are reviewed separately in Section H.2.

Limited information on this Census category is provided in Exhibit H.1. Consistent with other livestock and poultry industries, this category is characterized by a decrease in the number of farms from 1987 to 1992. Data are not available on the number of animals sold and animal inventories. The value of production was estimated at $217.8 million in 1992, down substantially from sales in 1987 valued at $370.0 million (current dollars). Wisconsin, New York, Pennsylvania, Texas, and Arkansas accounted for nearly 90 percent of total sales reported.

H.2 Other Non-Traditional Animal Industries

Production of animals that are considered emerging and/or exotic include the raising of animals ratites, alligators, bison, and llamas. These industries are briefly reviewed below, given available information. In many cases, data are limited to animal inventories and the number of farms for a representative year only. This information is patchy at best, and compiled from a wide range of disparate sources. Farm revenue and price information is not available, and market data are not generally available on these sectors. No information is available to provide an overview of these operations by representative farm size. Other U.S. non-traditional animal farms may include deer, antelope, and elk. However, these industries are not included here due to insufficient data and information.

H.2.1 Ratites

Ratites are a family of flightless birds with small wings and flat breastbones. These animals include ostriches, emus, rheas and cassowarys. The raising of ratites is an emerging agricultural industry, often banking on the fact that the meat of these animals is lower in fat and cholesterol than other meat and poultry products. The birds are usable for meat, feathers, oil and leather.

At this time, ratite meat is a specialty item available in a select few restaurants and stores, and is more expensive than beef, pork, chicken, and turkey (USDA, 1994). The infrastructure for slaughter and processing of products is extremely limited at present, but is critical for the industry to develop. Steps have been taken in the development of a slaughter and processing system. Only 20 to 30 processing facilities are in operation nationwide (Wilson, 1997).

Expectations for these markets have been largely unrealized. During the late 1980's and 1990's, production of ratites was being touted as a growth industry and many entered farming. In this period, the U.S. ratite industry was almost totally a breeder production system. Bird prices were very high and all birds, even those very marginal in quality, were marketed as breeders (Wilson,

1997). By 1996, the breeder market had reached the saturation point at which supply met or surpassed the demand. As a result, prices of birds decreased dramatically. Many farmers who have not found their expectations fulfilled have resorted to destroying their flocks. However, prices for high quality, proven breeders remained profitable (Wilson, 1997).

Ostrich. There are about 1,000 ostrich growers in the United States, raising between 40,000 to 60,000 animals (USDA, 1994). Most operations are located in Texas and California; however, there is at least one farm in every state (USDA, 1994). Markets for ostriches currently consist of breeder markets. The main products from ostrich are meat, leather (which is extremely durable with unique markings), and decorative by-products, namely, feathers and eggs (Sell, 1993). Compared to the emu and rhea markets, the outlook for the ostrich sector is stronger (Wilson, 1997). During the early 1990s, breeder stock prices ranged from $1,500 to $3,000 per bird, depending on sex and maturity (Sell, 1993).

Emu. There are an estimated 6,000 to 8,000 emu farmers raising an estimated 75,000 to 100,000 emus in the United States (USDA, 1994). Emu production has dropped significantly over the past few years down from nearly two million animals during the initial stages of development of the industry. Market development has been hampered by high costs for feed and breeding stock, unrealized demand, and falling prices. Emus are raised for feathers, hides (leather), meat, and, most recently, pharmaceutical uses. About one-half of all animals are on farms in Texas and Oklahoma (Presley, 1998). Recently, farms in Texas are reported to have abandoned flocks, illustrating how the industry has not proven as profitable as farmers had hoped (Washington Post, 1998).

Rhea and Cassowary. Rheas are the newest U.S. farm-raised ratite, with populations estimated at approximately 15,000 birds (USDA, 1996). No information is available on the location or the number of farms raising rheas. Information is not available on cassowary farming in the United States.

H.2.2 Alligators

Captive-breeding (farming) of alligators produces about 15,000 hatchlings annually, which accounts for about 5 percent of the total alligator population in the United States (UFL, 1997). There are about 350 alligator farms with current stocks exceed 350,000 alligators. Alligator farming and ranching is now done on a large scale, particularly in Louisiana and Florida. Alligators are used for both meat and hides. Annual production of skins in Florida alone is around 30,000 to 40,000 from all sources (UFL, 1997).

Regulation of alligator farming has been a successful part of ongoing conservation efforts. Controlled hunting and egg collection on both private and public lands are based on harvest allocations based on annual population surveys and nest counts for an area (UFL, 1997). Harvest quota are an integral part of the program. Commercial production of skins is highly regulated with an interlocking system of permits, licences, regular stock inventories, ranch inspections, and rigorous tagging and export permit requirements (UFL, 1997).

H.2.3 Bison

Limited information is available U.S. bison herds raised for the commercial market. Once hunted to levels near extinctions, bison numbers now exceed over 200,000 animals (NBA, 1997). Most of these animals are privately owned, but public herds can be found in many states. Bison can be found from Alaska to Florida and from New York to California. Most herds are in the Great Plains. Many Native American tribes are also bringing back the bison. Bison are used for meat, leather, wool and decorative items (NBA, 1997). Herd populations continue to grow to meet demand.

H.2.4 Llama

Little information is available on U.S. farms raising llamas for the commercial market. Currently, the number of llama raised in the United States is estimated at approximately 90,000 animal. Llamas are raised primarily for their fleece (Exotic & Livestock Magazine, 1998).

Exhibit H.1
Production (Animals/Product Sales), Number of Operations and Animal Inventories
Miscellaneous Other Industries, Total U.S., 1987 and 1992

Animal Commodity Group	Production [a]			Total Operations [b]			Year-end Inventory [c]		Animals per Farm [d]		Value of Sales [e]	
	1987	1992	%87-92	1987	1992	%87-92	1987	1992	1987	1992	1987	1992
	(animal/product sales)		(%)	($1992 million)		(%)	(number)				($1000)	
Traditional Farm Animals [f]												
Horses	338,152	307,209	-9%	415,565	338,346	-19%	2,456,951	2,049,522	6	6	833,646	647,311
Mules, Burros, Donkeys	7,147	9,007	26%	23,311	25,589	10%	56,620	67,692	2	3	2,245	2,614
Goats (total)	576,689	702,436	22%	45,032	47,164	5%	2,246,587	2,515,541	50	53	na	na
Milk Goats	4,369,866	7,222,917	65%	15,443	11,559	-25%	129,225	124,718	8	11	12,845	20,570
Angora Goats	13,180,549	13,655,639	4%	5,352	6,150	15%	1,702,166	1,799,280	318	293	45,882	32,316
Rabbit/Pelts	2,192,305	1,930,921	-12%	14,208	14,506	2%	671,722	789,406	47	54	11,632	14,974
Mink/Pelts	4,431,143	3,233,831	-27%	1,382	798	-42%	2,189,903	1,767,777	1,585	2,215	177,724	68,894
Other Livestock [g]	na	na	na	4,288	5,380	25%	na	na	na	na	217,759	370,004
Non-Traditional Farm Animals [h]												
Ratites	na	na	na	na	na	na	na	615,000	na	na	na	na
Ostriches	na	na	na	na	1,000	na	na	100,000	na	na	na	na
Rheas	na	na	na	na	na	na	na	15,000	na	na	na	na
Emus	na	na	na	na	6,000-8,000	na	na	500,000	na	na	na	na
Bison [I]	na	na	na	na	na	na	na	200,000	na	na	na	na
Alligators	na	na	na	na	150	na	na	350,000	na	na	na	na
Llamas	na	na	na	na	na	na	na	90,000	na	na	na	na

Source: U.S. Department of Commerce, Census of Agriculture (various years), Volume 1 (Part 51) and various other sources. Percentage change from 1982 to 1992.

[a] Production according to the total number of animals sold.

[b] Number of operations (inventory as of December 31).

[c] Average number of animals on all farms both commercial and non-commercial (inventory as of December 31).

[d] Number of animals per farm calculated from inventory data shown.

[e] Production: milk goats (goat milk, gallons); angora goats (mohair, pounds)

[f] Based on data reported regularly by the U.S. Department of Commerce, Census of Agriculture (various years).

[g] Exact information is not available on what is included in "Other Livestock". May include other non-traditional animals, which are cited separately (based on limited available information) and may duplicate animal numbers listed separately.

[h] Approximate number based on most recent information available through limited sources (various years, see references in text).

[I] Bison herd includes privately owned, but also public herds.